

## AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims in this application.

1. -16. (Canceled)

17. (Currently Amended) A method for determining mobile communications system carrier propagation characteristics, the method comprising:

receiving at a location a carrier signal from a transmitter of the mobile communications system, the mobile communications system operating in a standard operational mode, the carrier signal corresponding to a call handled by a cell without the cell keying up a test carrier frequency;

determining a strength indicator of the received carrier signal;

identifying the source of the received carrier signal;

determining a location identifier of the location;

determining a time of receiving the received carrier signal; and

storing a carrier signal identifier corresponding to the received carrier signal, the signal strength indicator, a source identifier corresponding to the identified source of the received carrier signal, and the location identifier wherein the mobile communications system does not decrease system capacity during the operation of said method for determining mobile communications system carrier propagation characteristics;

wherein identifying the source of the received carrier includes decoding a Short Messaging Service (SMS) message of the received carrier, the SMS message providing a unique identifying code identifying a cell generating the received carrier signal with the unique identifying code.

18. (Original) The method of claim 17, wherein the carrier signal is a carrier signal of a control channel.

19. (Original) The method of claim 17, wherein the carrier signal is a carrier signal carrying subscriber communications.

20. (Original) The method of claim 17, wherein the carrier signal is not a test carrier.

21. (Original) The method of claim 17, wherein operating a mobile communications system in a standard operational mode includes not transmitting a test carrier.

22. (Original) The method of claim 21, wherein the test carrier is a keyed-up carrier that does not carry subscriber communications.

23. (Canceled)

24. (Original) The method of claim 17, wherein determining the source of the received carrier includes determining that the received carrier has a received signal strength that is at least approximately the same as a received carrier from a known source.

25. (Original) The method of claim 17, wherein determining the source of the received carrier includes determining that the received carrier has a received signal strength that is not at least approximately the same as a received carrier from a known source.

26. (Canceled)

27. (Original) The method of claim 17, wherein determining the source of the received carrier includes determining the time delay of the received carrier.

28. (Original) The method of claim 17, further comprising determining carrier propagation characteristics of the received carrier signal based at least in part on one or more of the carrier signal identifier, the signal strength indicator, the source identifier, and the location identifier.

29. (Currently Amended) A method for determining mobile communications system carrier propagation characteristics, the method comprising:

a step for receiving at a location a carrier signal from a transmitter of the mobile communications system, the mobile communications system operating in a standard operational mode, the carrier signal corresponding to a call handled by a cell without the cell keying up a test carrier frequency;

a step for determining a strength indicator of the received carrier signal;

a step for identifying the source of the received carrier signal;

a step for determining a location identifier of the location;

a step for indicating a time of receiving the carrier signal; and

a step for storing a carrier signal identifier corresponding to the received carrier signal, the signal strength indicator, a source identifier corresponding to the identified source of the received carrier signal, and the location identifier wherein the mobile communications system does not decrease system capacity during the operation of said method for determining mobile communications system carrier propagation characteristics;

wherein the step for identifying the source of the received carrier includes decoding a Short Messaging Service (SMS) message of the received carrier, the SMS message providing a unique identifying code identifying a cell generating the received carrier signal with the unique identifying code.

30. (Original) The method of claim 29, wherein the carrier signal is not a test carrier.

31. (Original) The method of claim 29, wherein the carrier signal carries at least one of a control channel and a subscriber communications channel.

32. (Original) The method of claim 29, further comprising a step for determining carrier propagation characteristics of the received carrier signal based at least in part on one or more of the carrier signal identifier, the signal strength indicator, the source identifier, and the location identifier.

33. (Currently Amended) A computer-readable medium storing a plurality of instructions adapted to be executed by a processor for determining mobile communications system carrier propagation characteristics, the plurality of instructions comprising instructions to:

receive at a location a carrier signal from a transmitter of the mobile communications system, the mobile communications system operating in a standard operational mode, the carrier signal corresponding to a call handled by a cell without the cell keying up a test carrier frequency;

determine a strength indicator of the received carrier signal;

identify the source of the received carrier signal;

determine a location identifier of the location;

determining a time of receiving the received carrier signal; and

store a carrier signal identifier corresponding to the received carrier signal, the signal strength indicator, a source identifier corresponding to the identified source of the received carrier signal, and the location identifier wherein the mobile communications system does not decrease system capacity during the operation of said system for determining mobile communications system carrier propagation characteristics;

wherein identifying the source of the received carrier includes decoding a Short Messaging Service (SMS) message of the received carrier, the SMS message providing a unique identifying code identifying a cell generating the received carrier signal with the unique identifying code.

34. (Original) The computer-readable medium of claim 33, wherein the carrier signal is not a test carrier.

35. (Original) The computer-readable medium of claim 33, wherein the plurality of instructions further comprise instructions to determine carrier propagation characteristics of the received carrier signal based at least in part on one or more of the carrier signal identifier, the signal strength indicator, the source identifier, and the location identifier.

36. (Currently Amended) A system for determining mobile communications system carrier propagation characteristics, the system comprising:

means for receiving at a location a carrier signal from a transmitter of the mobile communications system, the mobile communications system operating in a standard operational mode, the carrier signal corresponding to a call handled by a cell without the cell keying up a test carrier frequency;

means for determining a strength indicator of the received carrier signal;

means for identifying the source of the received carrier signal;

means for determining a location identifier of the location;

means for determining a time of receiving the received carrier signal; and

means for storing a carrier signal identifier corresponding to the received carrier signal, the signal strength indicator, a source identifier corresponding to the identified source of the received carrier signal, and the location identifier wherein the mobile communications system does not decrease system capacity during the operation of said system for determining mobile communications system carrier propagation characteristics;

wherein the means for identifying the source of the received carrier includes means for decoding a Short Messaging Service (SMS) message of the received carrier, the SMS message providing a unique identifying code identifying a cell generating the received carrier signal with the unique identifying code.

37. (Original) The system of claim 36, wherein the carrier signal is not a test carrier.

38. (Original) The system of claim 36, further comprising means for determining carrier propagation characteristics of the received carrier signal based at least in part on one or more of the carrier signal identifier, the signal strength indicator, the source identifier, and the location identifier.

39. (Canceled)